

CONNECTING RAILWAY, READING RAILROAD OVERPASS
(Pennsylvania Railroad, New York Division, Bridge No. 68)
Pennsylvania Historic Railroad Bridges Recording Project
Amtrak Northeast Corridor, just north of Schuylkill River
Philadelphia
Philadelphia County
Pennsylvania

HAER No. PA-550

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PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
1849 C Street, NW
Washington, DC 20240

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Location: Amtrak Northeast Corridor, just north of Schuylkill River, Philadelphia, Philadelphia County, Pennsylvania

USGS Quadrangle: Philadelphia, Pennsylvania-New Jersey (7.5-minute series).

UTM Coordinates: 18/483600/4425080

Date of Construction: 1866-67.

Basis for Dating: Secondary sources.

Date of Alteration: 1912-15.

Designers: John A. Wilson (Chief Engineer, Connecting Railway Co.).

Builders: Thomas Seabrook.

Present Owner: National Railroad Passenger Corporation (Amtrak).

Present Use: Railroad bridge.

Structure Type: Brick arch.

Significance: This overpass, one of the early grade-separation structures on Philadelphia's Connecting Railway, retains its original brick arches, which are rarely found on U.S. railroads. The bridge is located in Fairmount Park, a National Register-listed historic district.

Historian: Justin M. Spivey, April 2001.

Project Information: The Historic American Engineering Record (HAER) conducted the Pennsylvania Historic Railroad Bridges Recording Project during 1999 and 2000, under the direction of Eric N. DeLony, Chief. The project was supported by the Consolidated Rail Corporation (Conrail) and a grant from the Pennsylvania Historical and Museum Commission (PHMC). Justin M. Spivey, HAER

CONNECTING RAILWAY, READING RAILROAD OVERPASS

HAER No. PA-550

(Page 2)

engineer, researched and wrote the final reports. Preston M. Thayer, historian, Fredericksburg, Virginia, conducted preliminary research under contract. Jet Lowe, HAER photographer, and Joseph E. B. Elliott, contract photographer, Sellersville, Pennsylvania, produced large-format photographs.

Description and History

The connection of Philadelphia and New York by rail was an early goal of the Philadelphia & Trenton Railroad (P&T), which, along with the Camden & Amboy Railroad of New Jersey, began offering through service in 1840. At Philadelphia, however, the Schuylkill River remained a major obstacle to west- and southbound rail traffic until after the Civil War.¹ The Connecting Railway, founded in 1863, constructed a 6.75-mile link between West and North Philadelphia with financial support from the Pennsylvania Railroad (PRR). From the PRR's Mantua yard, the new Connecting Railway crossed the Schuylkill and headed northeast to meet the P&T. Opened to traffic on 2 June 1867, it closed a major gap in the PRR system, eliminating a circuitous detour between West Philadelphia and the Hudson River waterfront opposite New York City. The Connecting Railway was initially leased to the P&T, then an independent company. In December 1871, however, PRR acquired the P&T by lease.² Although the Connecting Railway kept separate records and solicited its own contracts for improvements well into the twentieth century, the line was operated as part of PRR's New York Division.

John A. Wilson, Chief Engineer of the Connecting Railway, likely designed the Schuylkill River bridge and other structures when he surveyed the line in late 1863. The railroad was initially elevated above city streets for a significant portion of its length. Other grade-separation structures include the subject of this report, an overpass to carry the Connecting Railway over the Philadelphia & Reading Railroad (P&R) tracks immediately north of the Schuylkill River bridge. On 9 March 1864, the same day that the Connecting Railway's directors awarded Thomas Seabrook a contract "for the masonry required to be constructed along the entire line of the road," they also read Wilson's letter of resignation.³ Wilson had taken a job with the P&R, and was replaced by George B. Roberts, who oversaw the railroad's construction during 1866 and 1867.

Whereas the Schuylkill River bridge was almost completely rebuilt from 1912 to 1915, the P&R overpass retains the brick arch construction used for both structures in 1867. The Schuylkill River bridge was sheathed in sandstone, but the less prominent overpass was built entirely of brick. Because of the labor-intensive nature of brick construction, such structures are rarely found on U.S. railroads. Originally two tracks wide, the overpass consists of a 55'-7" skew arch span flanked by two 22'-0" skew arches.⁴ Like several other brick arch railroad structures near downtown Philadelphia, its original portion has a "false skew" created by offsetting a series of arch ribs in a stair-step pattern. Although the brick parapet walls have since been removed, the 1867 brick arches still carry two tracks on the south side of the structure.

CONNECTING RAILWAY, READING RAILROAD OVERPASS

HAER No. PA-550

(Page 3)

Increasing traffic during the early twentieth century led the PRR to consider widening its New York Division from two to four tracks, with a fifth track near downtown Philadelphia. A resolution of the Connecting Railway directors, passed on 27 March 1912, was consistent with this plan. The railroads subsequently began negotiations with the Fairmount Park Commission, agreeing in December 1913 to trade land along the PRR's Chestnut Hill branch for additional Connecting Railway right-of-way.⁵ While involvement of the Fairmount Park Commission and other city authorities may have influenced the decision to rebuild the Schuylkill River bridge in stone, the P&R overpass seems to have been subject to less stringent aesthetic controls. The overpass, like many masonry railroad bridges of the time, received reinforced concrete arch extensions. Concurrently with the 1912-15 reconstruction of the Schuylkill River bridge, Philadelphia contractors Reiter, Curtis & Hill extended the overpass's width by three tracks to the north. Once trains were running on the new tracks, the contractors removed the south spandrel wall and earth fill down to the brick arch ring, which they strengthened before rebuilding the spandrel wall in reinforced concrete.⁶ The alteration demonstrates some sensitivity to the original design, however, in keeping the brick arch ring visible on the south elevation, horizontal scoring to simulate coursed stone, and otherwise duplicating its dimensions.

Other than the installation of overhead catenary wires, the overpass has been little altered since. Amtrak Northeast Corridor and Southeastern Pennsylvania Transportation Authority (SEPTA) R7 and R8 passenger trains currently cross the bridge. The tracks below, which once carried P&R trains into the Reading Terminal, have been relegated to freight service.

CONNECTING RAILWAY, READING RAILROAD OVERPASS

HAER No. PA-550

(Page 4)

Notes

1. James E. Vance, Jr., *The North American Railroad: Its Origin, Evolution, and Geography* (Baltimore: Johns Hopkins Univ. Press, 1995), 113.
2. Howard W. Schotter, *The Growth and Development of the Pennsylvania Railroad Company: A Review of the Charter and Annual Reports of the Pennsylvania Railroad Company 1846 to 1926* (Philadelphia: Press of Allen, Lane, and Scott, 1927), 61, 75, 97-98.
3. Connecting Railway Company, *Minute Book No. 1*, 10, in Box 94, Pennsylvania Railroad Records, Urban Archives, Paley Library, Temple University, Philadelphia, Pa.
4. Fairmount Park Guard Pension Fund Association, *Souvenir of Fairmount Park* (Manayunk, Pa.: Reichert & Co., 1914), 79, in Fairmount Park Commission Archives, Philadelphia, Pa.
5. Connecting Railway, *Minute Book No. 1*, 399; cf. Fairmount Park Commission, *Meeting Minutes*, 12:178, 12:286-87, transcript in folder "Railroads in Park - General," Fairmount Park Commission Archives, Philadelphia, Pa.
6. Fairmount Park Guard Pension Fund Association, *Souvenir of Fairmount Park*, 79.

Additional Sources

1. Milepost 2.85, region/division/branch 100341, aperture card files, Consolidated Rail Corporation, Philadelphia, Pa. [transferred to Norfolk Southern Railway Co., Atlanta, Ga.].
2. National Railroad Passenger Corporation (Amtrak) archives, Philadelphia, Pa.